BUILDING REGULATIONS

OF THE

TOWN OF ARLINGTON

ADOPTED BY THE TOWN NOVEMBER 22, 1910, AND APPROVED BY THE ATTORNEY GENERAL OF THE COMMONWEALTH DECEMBER 7, 1910.

BOSTON:
JOHN F. BIGGS & CO., 54 High Street
1910

BY-LAWS FOR THE CONSTRUCTION OF BUILDINGS.

Section 1. An Inspector of Buildings shall be appointed annually by the Selectmen during the month of March, and he shall continue to hold his office until his successor has been appointed and qualified. He shall not be interested in any contract or engagement for furnishing labor or materials or plans for the construction or alteration of any building in the Town.

Sect. 2. The Inspector shall examine all buildings in the course of construction, alteration and repair and see that all By-laws of the Town in relation thereto are complied with and, when necessary, shall take proper measures to secure such compliance. He shall make an annual report of his work to the Selectmen, with such recommendations as he may deem best. He shall perform such other duties as may be prescribed by these By-laws.

None of the provisions of these By-laws shall be construed so as to conflict with the requirements made by the District Police under the authority of Chapter 104 Revised Laws.

Sect. 3. No building, except those which come under the provisions of Revised Laws, Chapter 104, Section 22, and one-story wooden buildings less than ten feet square, and no addition to or alteration changing the character of any such building shall be made, by any person unless he has received a permit therefor from the Inspector of Buildings. For the purpose of obtaining such a permit the person intending to erect or make such alterations in such buildings shall, seven days at least before he proceeds to build or erect the same, or lay the foundation thereof, or to make the said alterations, or to do any act for carrying into execution his intention to do such things, file with the Inspector of Buildings a notice in writing of his intention, with such plans and specifications, or a full written description of the structure to be erected, in such form as may be approved by the Inspector, together with a written authority from the owner of the property upon which the structure is to be built, authorizing the Inspector to enter

the premises at all reasonable times and inspect the work of construction.

Sect. 4. Upon receiving said plans and specifications or description and authority, the Inspector shall give a permit for the erection of addition to, or alteration above described, of any building after he has carefully inspected the plans, specifications, or descriptions thereof, and ascertained that they provide for all requirements of the Statutes and By-laws.

Sect. 5. No buildings, except a manufactory, railway station, stable, church, schoolhouse, hotel, garage, or hall for public assemblies shall hereafter be erected, and no existing building shall be altered or added to, thereby giving it a frontage of more than fifty feet, without one or more partition walls of brick or some fire-resisting material, approved by the Inspector, extending from the bottom of the cellar, or from a foundation wall to the under side of the roof-boarding, which shall be laid and be imbedded in mortar upon said wall. Such walls shall not be more than fifty feet apart throughout the length of the building. No existing building having a frontage of more than fifty feet shall be converted to a use not excepted by this section, without at least one partition wall, constructed as described in this section. Provided, however, that any single dwelling house intended for one family may be extended more than fifty feet in one direction without such partition wall.

In brick, stone, or concrete buildings of more than one story (unless used for manufacturing purposes) where the partition walls are forty feet or more apart, the floors must be made fire-proof by the use of concrete, or other fire-resisting material.

Sect. 6. All buildings hereafter erected, which are to be used in whole or in part for business or manufacturing purposes, or as places for public meetings, including all the area within one hundred feet of the following described lines: beginning at the northeasterly corner of Swan and Pleasant Streets, thence running northeasterly to the southeasterly corner of Pleasant Street and Massachusetts Avenue, thence southeasterly on the southerly line of Massachusetts Avenue to a point opposite the Soldiers' Monument. Beginning again at a point in the northerly line of Broadway opposite the Soldiers' Monument and running northwesterly along the northeasterly lines of Broadway and Massachusetts Avenue to Central Street, shall be constructed of brick, stone or con-

crete, and have slate, metal or composition roof-covering and metal gutters, unless permission is otherwise given by the Board of Selectmen.

Sect. 7. All buildings hereafter erected to be used as tenement houses, in excess of thirty feet in width, shall have brick partition walls on which floor beams shall rest, not less than twelve inches thick for their entire height, and extending to the under side of the roof-boarding, which shall lay and be imbedded in mortar upon said wall. Said walls shall not be more than twenty-five feet apart. All double houses shall have a fire-proof partition wall between the tenements, consisting either of a brick wall, not less than twelve inches thick, extending from the cellar bottom to the underside of the roof boarding, or of a brick wall, not less than twelve inches thick, extending from the cellar bottom to the top side of the first floor timbers, and above that to the under side of the roof boarding of two by five inch studding, with the spaces between filled solid with bricks and mortar, not less than four inches thick, to make a smoke tight barrier between the tenements.

Sect. 8. No wooden building, to be used for a dwelling house, shall exceed forty-five feet in height, and no portion of any wooden building shall be placed at a less distance than five feet from the line of the lot upon which the building is to be located, or within ten feet of another wooden building, except where a brick external wall is substituted for a wooden wall, and of a thickness and in the manner prescribed for external walls of brick buildings.

FOUNDATIONS.

Sect. 9. Excavations for foundations shall be made six inches beyond the outside of foundation walls and shall not be backfilled until inspected. The foundations of all buildings for dwelling, business or manufacturing purposes, shall be walls of masonry and piers of masonry or iron, and shall be laid in cement mortar. All wooden buildings not more than two stories in height, may, with the approval of the Inspector be built wholly on piers or posts. The foundations of all buildings must rest on solid ground or leveled surfaces of solid rock, or on piles, concrete, or other solid sub-structure. Such foundation other than solid rock must be not less than four feet below the adjacent surface of the ground exposed to frost. Piazzas, porches, and bay-windows shall have a suitable foundation

of stone, brick, iron or concrete, built on solid bottom, not less than four feet below, and extending not less than three inches above the finished grade, and no wood work shall come below that grade.

WOODEN BUILDINGS.

Section 10. All wooden frame buildings shall be built with sills, posts, girts and plates, all to be mortised, tenoned, braced and pinned together, except the plates, which may be mortised or thoroughly spiked to studding and posts. All buildings shall be braced in each story and in cross-partitions if deemed necessary by the Inspector.

WALLS.

In all wooden buildings not exceeding three stories in height the posts of which exceed twenty-two feet in length, the sills shall be not less than six by eight inches laid flatways, and the posts and girts not less than four by eight inches; in all such buildings the posts of which are twenty-two feet or less in length, the sills shall be not less than six by six inches, and the posts and girts not less than four by six inches; in all wooden buildings the studding of the outside walls shall be not less than two by four inches, set sixteen inches on centres; in all wooden buildings the studding in all partitions carrying floor timbers shall be not less than two by four inches, set not more than sixteen inches on the centres, and resting on girders not less than six by eight inches. All window studding to be not less than three by four inches. Ledger boards may be used in place of girts in one and one-half story houses or in dwellings where the attic floor is below the plates, if the spaces back of ledger boards between studding shall be filled with joists of same size as wall studs cut in tight so as to prevent a draft in case of fire. All one and one-half story buildings shall have end girts mortised, tenoned and pinned together. All self-supporting walls or partitions above the first floor in any building shall be trussed in a manner approved by the Inspector.

FLOOR TIMBERS.

Section 11. Floor timbers in dwelling houses, when of good sound spruce set sixteen inches on centres, shall be of the following sizes; for a span not exceeding ten feet the timbers shall be not

less than two by seven inches; for a span not exceeding twelve feet the timbers shall be not less than two by eight inches; for a span not exceeding fourteen feet the timbers shall be not less than two by nine inches; for a span not exceeding sixteen feet the timbers shall be not less than two by ten inches; for a span not exceeding eighteen feet the timbers shall be not less than two by twelve inches; for a span not exceeding twenty feet the timbers shall be not less than two by fourteen inches; for a span not exceeding twenty-two feet the timbers shall be not less than three by twelve inches; for a span not exceeding twenty-four feet the timbers shall be not less than three by fourteen inches in size, or of size giving their equivalent in strength.

There shall be girders not less than six by eight inches under main partitions and summers or floor timbers doubled, or their equivalent, under all cross-partitions in the first floor of all dwellings. Headers and trimmers of all openings more than four feet square in first floor of dwellings shall be floor joists doubled, or their equivalent, and in any floor that may be deemed necessary by the Inspector. Beams carrying main or cross partitions in first floor shall be supported on piers or iron posts not more than seven feet apart; trimmers in first floor over twelve feet in length shall be supported by a pier or post.

The attic floor timbers shall not be less than two by seven inches for any attic whether finished or unfinished, to which there is access and which can be used for storage or other purposes.

All floor timbers with a span from ten to sixteen feet shall have one row of bridging; all floor timbers with a span of sixteen feet or more shall have a bridging at least every eight feet, and all bridging stock shall be not less than one by two inches.

All cutting of floor timbers for the passage of pipes shall be on their upper edges, and no cut shall exceed two inches in depth, or be made more than three feet from the point of support of the timber unless the consent of the Inspector has first been obtained. No cutting in the under side of a floor timber will be allowed for any reason.

ROOF TIMBERS.

Sect. 12. In buildings which are eighteen feet or more in width rafters for pitched roofs shall measure not less than two by six

inches, and larger where deemed necessary by Inspector, and spaced not more than twenty inches on centres; in buildings which are less than eighteen feet in width the size of rafters may be determined by the Inspector. Valley rafters shall be of such sizes as the Inspector shall prescribe, having due regard to the length and the area of the roof to be supported, but in no case shall be less than two by eight inches; all timbers herein mentioned to be solid sticks excepting the plates, which may be in two pieces, each two by four inches, thoroughly spiked together.

Flat roofs shall be timbered the same as floors.

BRICK BUILDINGS.

Sect. 13. All brick walls shall be built with proper bond satisfactory to the Inspector and all intersections of walls shall be tied together with wrought iron straps as often as every eight feet in height. Floor beams shall be anchored to brick walls on which they rest and to each other so as to form continuous ties across the building, when directed by the Inspector and at least every ten feet.

Sect. 14. External walls of brick dwelling houses, if not more than twelve feet in height, above the foundation walls, shall be not less than eight inches thick for their entire height; if two stories and not more than twenty-five feet in height, they shall be not less than twelve inches thick to the top of the second floor, and not less than eight inches thick for the remaining height; and if three stories and more than twenty-five feet in height, they shall be not less than twelve inches thick to the top of the third floor, and not less than eight inches thick for the remaining height.

Sect. 15. The external walls of all brick buildings, other than dwelling houses, if not more than forty feet in height, above the foundation walls, shall be not less than sixteen inches thick to the top of the upper floor, and not less than twelve inches thick for the remaining height; and if more than forty feet in height and not exceeding sixty feet in height, they shall be not less than twenty inches thick to the top of the second floor, and not less than sixteen inches thick to the top of the third floor, and not less than twelve inches thick for the remaining height. Provided, however,

that with the approval of the Inspector the method known as "Mill Construction" may be used whereby the external walls are constructed of a series of piers, of such width as the Inspector may approve, and of the thickness above prescribed for external walls. Said piers to be connected by curtain walls. Said curtain walls shall be well bonded to the piers, and not less than eight inches thick, in which all windows or other openings must be made. All floors must be supported on the piers and no portion of a floor shall for any reason be supported on the curtain walls.

The external walls of brick buildings, not exceeding twenty-five feet in height and covering an area not exceeding two thousand square feet to be used for stables or light mechanical purposes, may be twelve inches thick.

Sect. 16. Party walls and all partition walls of brick, in all buildings other than dwelling houses with external walls not exceeding forty feet in height, shall be not less than sixteen inches thick to the top of the second floor, and not less than twelve inches thick for the remaining height, and, in buildings having external walls exceeding forty feet in height, said walls shall be not less than twenty inches thick to the top of the second floor, not less than sixteen inches thick to the top of the third floor, and not less than twelve inches thick for the remaining height.

Sect. 17. No opening or doorway shall be cut through or formed in a party or partition wall of any building without a permit from the Inspector of Buildings, and every such doorway shall have its top, bottom and sides of stone, brick or iron, and shall be closed by two doors or sets of doors of wood, covered with metal, with an air space between them of at least four inches, and said doors shall be hung to slide or swing in wooden frames entirely covered with metal, or to iron hinges or track in brick or stone rabbets.

PIERS AND COLUMNS.

Section 18. All piers shall be built of the best quality of good well-burnt hard brick, laid in cement and sand mortar and well wet when laid in warm weather. Brick piers under lintels, girders or columns of brick buildings shall have a properly proportioned cap of cast iron or steel the full size of the pier. Brick piers and buttresses shall be bonded with through courses, levelled and bed-

ded each course, and where their foundations rest upon piles a sufficient number shall be driven to insure a proper support.

Sect. 19. Every pier, column, pillar or post resting on the earth shall have a base course of stone or concrete and, if supporting walls of masonry, shall have for a footing course a broad leveller of granite or ledge stone not less than twelve inches wider on all sides than the bottom area of said piers, columns, pillars or posts and not less than twelve inches thick.

Sect. 20. Every metal column in a brick building shall rest on a square iron plate not less than two inches thick, with lugs or a socket cast on it to hold the end of the column in place, and unless the columns are cast with a large flat topped head shall have a similar plate on top, on which the beam or girder which it is to support shall rest. The sides of the bottom plate to be at least two and one-half times the diameter of the column, and the sides of the top plate or cast cap to be at least equal to the width of the beam or girder which it is to support. Wooden columns supporting girders and floors in such buildings shall rest on, and be capped by, one and one-half inch iron plates with lugs or sockets to receive the ends of the columns. All round wooden columns shall have holes not less than one inch in diameter bored through their centre for their whole length. Metal columns placed one on top of another shall have a plate between them with lugs or sockets on both sides to fit into top and base of columns to prevent slipping, and all such columns shall have holes bored when and where directed by the Inspector, into and through the shell at right angles to the shaft, so as to show the thickness of the shell. All bearing parts of columns and plates shall be turned or planed to true surfaces. Metal columns in wooden buildings shall have iron foot plates and caps whose width or diameter shall be three times the diameter of the column, or in case of caps at least equal to the width of the beam or girder which is to be supported. They shall be of such thickness as the Inspector may require, but not less than five-eights inches in any case, and shall have lugs or sockets cast on them to hold the ends of the column in place. Wooden columns or posts shall have similar foot plates and caps.

FLOOR LOADS.

Sect. 21. All new or renewed floors and stairs shall be so constructed as to carry safely the weight to which the proposed use of

the building may subject them, and every permit granted shall state for what purpose the building is designed to be used; but the least capacity per superficial square foot, exclusive of materials, shall be:

For floors of houses for habitation, sixty pounds.

For office floors and for public rooms of hotels exceeding five hundred square feet, one hundred pounds.

For floors of retail stores and public buildings, except school houses, one hundred pounds.

For floors of school houses, other than floors of assembly rooms, sixty pounds, and for floors of assembly rooms, one hundred and twenty-five pounds.

For floors of drill rooms, dance halls and riding schools, two hundred pounds.

For floors of warehouses and mercantile buildings, at least two hundred pounds.

For flat roofs, forty pounds.

For stairs, landings, platforms and fire escapes, seventy pounds.

The loads not included in this classification shall be determined by the Inspector.

The full floor load specified in this section shall be included in proportioning all parts of buildings designed for warehouses, or for heavy mercantile and manufacturing purposes. In other buildings, however, reductions may be allowed as follows: for girders carrying more than one hundred square feet of floor, the live load may be reduced ten per cent. For columns, piers, walls and other parts carrying two floors, a reduction of fifteen per cent of the total live load may be made. Where three floors are carried, the total live load may be reduced by twenty per cent; four floors, twenty- five per cent; five floors, thirty per cent; six floors, thirty-five per cent.

The Inspector may prescribe the maximum loads which may be imposed upon the floors of the existing buildings.

CHIMNEYS AND HEATING APPARATUS.

Sect. 22. All chimneys hereafter erected shall be built from the ground of brick, stone or other fireproof non-heat-conducting materials, and shall be built plumb, or nearly so, so as to be self-sustaining; provided, however, that brick flues may be securely built into the brick work of the walls of the building to which they are hung, when the walls are not less than twelve inches thick;

and provided also, that, upon special permission, first obtained from the Inspector, other forms of support may be used with such special safeguard as he may require, and provided also, that the matter of construction of chimneys in small wooden buildings, other than dwelling houses, not more than one story and one-half in height, shall be left to the decision of the Inspector of Buildings, but must be constructed in accordance with his instructions and to his satisfaction.

Sect. 23. All brick chimneys shall be built of hard burned brick plastered outside below the roofing after having been examined and approved by the Inspector of Buildings, except that exposed portions of said chimneys may be left unplastered upon the outside. Said chimneys shall be topped out with brick or stone, laid in cement, and the topping out shall not have more than two inches projection unless the bricks are covered by a cap of stone or other non-combustible material, in one piece, properly secured, and approved by the Inspector; and in no case shall a nail be driven into the masonry of any flue. All chimneys with exterior walls less than eight inches thick shall be lined with vitrified clay flue-lining.

Sect. 24. No smoke pipe in any building with wooden or combustible floors or ceilings shall hereafter enter any flue except at a distance not less than twelve inches from said floor or ceiling; and in all cases where smoke pipes pass through stud or wooden partitions of any kind, whether the same be plastered or not, they shall be guarded by a soap stone ring having a thickness radial to said pipe of not less than two inches, and extending through said partition, and in cases where smoke pipes pass through woodwork of any kind in such near proximity to the brick work of the flue that the space between said woodwork and flue is inaccessible, said pipe shall be guarded by a soap-stone ring or thimble, or its equivalent, having a thickness of at least two inches, and extending from the outer face of said woodwork to a point at least two inches within the brickwork of the flue, in which it shall be firmly set.

Sect. 25. All hearths shall be supported upon trimmer arches of brick or stone, or upon bars of iron supporting a bed of brickwork and shall be at least twelve inches longer than the width of the fireplace openings and at least eighteen inches wide in front of

the chimney breast. Wooden centreing supporting a trimmer arch shall be removed before plastering.

Sect. 26. Brickwork of all grates, fireplaces and ranges shall be not less than eight inches thick, and when it adjoins a wooden or stud partition shall have at least two four-inch walls, with at least two-inch air space between. No woodwork shall be secured to the brickwork of any flue. Open fireplaces shall have fireproof foundations.

Sect. 27. *a.* No furnace or range set in masonry shall hereafter be placed, or its location changed in any building, without a permit from the Inspector of Buildings, who shall prescribe such regulations for the setting or placing thereof as in his judgment the public safety may require.

b. The top of every heating furnace or steam boiler shall be kept at least one foot below the lowest part of the ceiling or floor next above it, and such protective covering shall be placed on such ceiling as the Inspector may require.

c. All register boxes shall be set in soap-stone or similar borders not less than two inches in width and said boxes back of such border shall be surrounded by an open space of not less than one inch in all directions and when required by the Inspector the timbers and flooring surrounding the boxes shall be protected by sheet-metal as he may direct.

d. All elevator wells and light shafts, unless built of brick, must be filled in flush between the wooden studs with fire-proof materials, or lined with metal or plastered on metal lathing, as may be directed by the Inspector, and all woodwork inside of such wells or shafts be lined with tin plate lock-jointed.

e. Where floor beams rest on partition caps or on girders, wall girts or wooden sills, fill in between such beams, from the caps, girders, girts or sills to four inches above lining floor above, solid with brick and mortar or other fire-proof material.

f. When floor beams in frame buildings rest on ledger boards, fire-stop thoroughly at each floor, with brick and mortar, resting on bridging pieces cut in between the studs, or, where practicable, on the ends of lining floor.

g. In brick buildings the space between the furring on the outside walls or brick partitions should be filled flush with mortar for

a space of five inches in width above and below the floor beams of each story.

h. Where basement or other flights of stairs are enclosed by partitions of brick or wood, the spaces between the studs or wall furrings must be so fire-stopped with brick or mortar as to effectually prevent any fire from passing up between such studs or furring back of the stair stringers.

i. All flights of stairs between two floors must have two smoke stops built between the stringers and properly constructed.

j. No pipes for conveying hot air or steam must be placed nearer than one inch to any woodwork unless protected to the satisfaction of the Inspector by suitable guards or casings of incombustible material.

k. No wooden flue or air duct of any description can be used for heating or ventilating purposes.

l. A space of at least one inch to be left between all woodwork and the chimneys, with the exception of floor timbers which shall be not less than two inches from chimneys, also around all hot-air, steam and hot-water pipes; these spaces around chimneys and pipes where they pass through the floors to be stopped with metal or other fire-proof material, smoke tight. Steam and hot-water pipes to have metal sleeves and collars.

m. All channels and pockets for gas, water and soil pipes to be made smoke-tight at each floor.

n. The space around all metal or brick ventilating ducts must be fire-stopped at each floor with metal or other fire-proof material as approved by the Inspector.

o. Where a building is occupied above the first floor for tene ments or a lodging house and the lower story is occupied for stores, or other purposes not connected with the upper floors, the stairways leading to such upper floors must be enclosed with brick walls or with wooden partitions filled solid with brick laid in mortar, or other fire-proof material and plastered on both sides on metallic lathing, and all doors in such partitions covered with tin plate, lock-jointed.

SAFEGUARDS DURING BUILDING OPERATIONS.

Sect. 28. Whenever any person is about to erect or alter the exterior walls of a building, within five feet of the line of a street, he

shall cause the portion of the site of the building bordering upon the street to be enclosed by a proper fence not less than four feet high and at least five feet from the line of such building; and the fence shall be made as much higher as the Inspector of Buildings shall direct, and the same shall be maintained until all liability to accident from falling material ceases; he shall also maintain a proper walk satisfactory to the Inspector, around said fence, as long as the sidewalk is obstructed, and he shall maintain proper lights, if so required by the Inspector, at both ends of such enclosed space from sunset to sunrise. In erecting any building, no person shall place, deposit or suffer to remain in any street or highway, any lumber or other building material, rubbish, or remains of any old building for a longer period than may be necessary for the work which may be going on; and in case such material, rubbish or remains of an old building shall necessarily remain after dark, a sufficient light shall be placed over or near the same, and kept from sunset to sunrise. All rubbish from the erecting or repairing of any building or the removal of an old building, shall be carried away by the person so erecting, repairing or removing such building, at such time as the superintendent of streets may direct; and in case of neglect or refusal so to do, it shall be removed by the superintendent of streets, at the expense of such person. Any person violating any provision of this section shall be liable to a penalty of five dollars.

Sect. 29. All questions as to the intent and meaning of the By-laws relating to the construction of buildings shall be decided by the Inspector.

Sect. 30. In these By-laws the following terms shall have the meanings respectively assigned to them: —

"Alteration" means any change or addition.

"Cellar" means a basement or lower story, of which one-half or more of the height of the floor to the ceiling is below the level of the land adjoining.

"Foundation" means that portion of a wall below the level of the street curb, and where the wall is not on a street, that portion of the wall below the level of the highest ground next to the wall; but if under party or partition walls, may be construed by the Inspector to mean that portion below the cellar floor.

"Chimney" shall apply to any permanent or fixed flues or pas-

sages built into any building for conveying away the products of combustion from furnaces, stoves, boilers, ranges or fireplaces.

"Inspector" means the Inspector of Buildings of the Town of Arlington.

"Party wall" means every wall used, or built in order to be used as a separation of two or more buildings.

"Partition wall" means any interior wall of masonry in a building.

"External wall" means every outer wall or verticle enclosure of a building other than a party wall.

"Repairs" means the reconstruction or renewal of any existing part of a building or of its fixtures or appurtenances by which the strength or fire risk is not effected or modified, and not made in the opinion of the Inspector for the purpose of converting the building in whole or in part to a new use.

"Tenement house" means a building, which, or any portion of which, is occupied, or intended to be occupied, as a dwelling by more than three families living independently of one another and doing their cooking upon the premises; or by more than two families above the first story, so living and cooking.

"Thickness" of a wall means the minimum of thickness of such wall.

"Persons" shall mean individuals, co-partnerships or corporations.

Sect. 31. Whoever violates any of the provisions of these By-laws shall be liable to a penalty of not more than one hundred dollars unless another penalty is specifically provided herein.

Sect. 32. The provisions of these By-laws shall not apply to buildings and structures owned or occupied by the United States or by the State of Massachusetts, nor to bridges.

Sec. 71 of Ch. 75 - R.L.
Power of Bd. of H - to vacate a
dwelling.

? - if a person has erected a building ~~Cost~~ without obtaining a permit what can the Town do - Inside the penalty as provided on p 14